

# इंटरनेट

# मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 8738 (1978): Parachute Buckles, D-Shaped [PGD 14:  
Consumer Products and Allied Equipments]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



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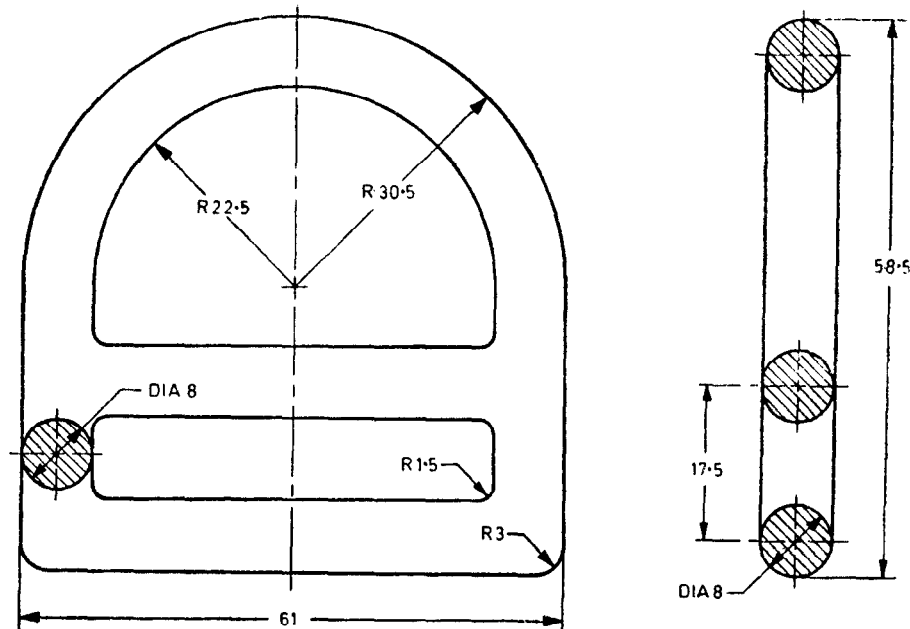




Indian Standard  
SPECIFICATION FOR  
PARACHUTE BUCKLES, D-SHAPED

**1. Scope** — Dimensional and other requirements for parachute D-shaped buckles.

**2. Shape and Dimensions** — As shown in Fig. 1.



All dimensions in millimetres.

FIG. 1 PARACHUTE BUCKLES, D-SHAPED

**2.1** A deviation of  $\pm 0.5$  mm shall be allowed on all dimensions affecting cross-sections.

**2.2** A deviation of  $\pm 0.0$  mm shall be allowed on all dimensions given in Fig. 1.

**3. Material** — The material shall be steel of any one of the compositions given in Table 1.

TABLE 1 CHEMICAL COMPOSITION (PERCENTAGE)

SI No.	Type	Carbon	Manga- nese	Phospho- rous	Sulphur	Silicon	Chrom- ium	Nickel	Molyb- denum
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
i)	Chromium- molybdenum steel	0.38 to 0.43	0.75 to 1.00	0.040 (Max)	0.040 (Max)	0.20 to 0.35	0.80 to 1.10	—	0.15 to 0.25
ii)	Chromium- molybdenum steel	0.28 to 0.33	0.40 to 0.60	0.025 (Max)	0.025 (Max)	0.20 to 0.35	0.80 to 1.10	0.25 (Max)	0.15 to 0.25
iii)	Chromium- nickel- molybdenum steel	0.28 to 0.33	0.70 to 0.90	0.040 (Max)	0.040 (Max)	0.20 to 0.35	0.40 to 0.60	0.40 to 0.70	0.15 to 0.25
iv)	Chromium- nickel- molybdenum steel	0.37 to 0.43	0.70 to 1.05	0.040 (Max)	0.040 (Max)	0.20 to 0.35	0.35 to 0.65	0.35 to 0.75	0.20 to 0.30

Adopted 10 March 1978

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## **IS : 8738 - 1978**

**3.1** Aircraft quality steel conforming to Designation 40Ni2Cr1Mo28 of IS : 5517-1969 'Specification for steel for hardening and tempering' may also be used.

### **4. Workmanship and Finish**

**4.1** All the corners of the buckles shall be properly chamfered.

**4.2** All sharp edges and corners shall be rounded off.

**4.3** The buckles shall be free from cracks, burrs, pits and other defects.

**4.4** The buckles shall be free from bend or distortion.

**4.5** The buckles shall be plated chromium and nickel over copper. The minimum thickness over the surface shall be copper 0.008 mm, nickel 0.025 mm and chromium 0.00025 mm. The plating surfaces shall be free from blisters, pits, stain and discolour. The plating shall be uniform throughout and shall be polished bright all over. The plating shall not peel off. The buckles shall be kept at a temperature of 150 to 175°C for a minimum period of half an hour in order to relieve hydrogen embrittlement.

### **5. Tests**

**5.1** The buckles shall be uniformly hardened and tempered to give a hardness of 370 — 430 HV.

**5.2** The buckles shall be tested for proof load. The proof load shall not be less than 22.26 kN (2 270 kgf).

**5.3** Crack detection test shall be conducted by the use of a suitable magnetic crack detector prior to plating of the buckles.

**5.4** The buckles shall be tested for tensile strength. The tensile strength shall be 1 176.80 to 1 314.09 MN/m<sup>2</sup> (120 to 134 kgf/mm<sup>2</sup>).

**5.5 Adhesion Test** — The plated surface of the buckles shall be rubbed rapidly and firmly for 15 seconds with a smooth copper disc used edgewise. There shall be no indication of the deposition becoming detached from the basic metal.

**5.6 Salt Spray Test** — The buckles shall be subjected to 20 percent sodium chloride salt solution spray in a chamber. There shall not be any sign of corrosion on completion of the test.

**6. Marking** — Each buckle shall be marked with the manufacturer's name or initials or registered trade-mark.

**6.1 ISI Certification Marking** — Details available with the Indian Standards Institution.

**7. Packing** — The buckles may be packed as agreed to between the purchaser and the supplier.